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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/639,599	08/16/2000	Alex S. Toback	TOB/102/US	2976
2543	7590	07/21/2005	EXAMINER	
ALIX YALE & RISTAS LLP 750 MAIN STREET SUITE 1400 HARTFORD, CT 06103			OMGBA, ESSAMA	
			ART UNIT	PAPER NUMBER
			3726	

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

511

Office Action Summary	Application No.	Applicant(s)	
	09/639,599	TOBACK, ALEX S.	
	Examiner	Art Unit	
	Essama Omgba	3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Orowan (US Patent 3,655,424).

With regards to claims 1-3, 8-10, 16, 17, 19, 20, 22 and 23, Appellant, at pages 1 and 3 of the specification to be known as AAPA, discloses a connection system for light gauge steel construction and an assembly wherein numerous self-drilling screws or other fasteners are used to provide the connection between a panel and a support structure. AAPA does not disclose applying an adhesive curable at room temperature to at least the panel or the support structure and placing them against each other.

However it is known to use an adhesive material between plates of a lap joint used in a connection with rivets or other fasteners as attested by Orowan, see column 1, lines 8-30 and figure 1. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used an adhesive material in the connection of AAPA, in light of the teachings of Orowan, in order to relieve the load on fasteners to a relatively small extent and give protection against fretting between the parts joined. Applicant should note that the connection of Orowan is significantly enhanced in load bearing capacity, see column 1, lines 24-29 in particular. Regarding

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the recitation of the adhesive being curable at room temperature, Applicant should note that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used an adhesive curable at room temperature to supplement the fasteners in the connection taught by AAPA/Orowan as evidenced by Applicant's admission that such adhesives are known, see page 3, lines 8-13 of the specification, in order to realize the benefits of using such known and available adhesives. Furthermore the product-by-process limitation that the adhesive is curable at room temperature does not affect the claimed connection system and therefore does not impart patentability to the product. As outlined above the connection system in the product-by-process claim is obvious from the connection of AAPA/Orowan. Furthermore the connection system itself comprises epoxy adhesive and at least one fastener in the joint. The fact that the adhesive was cured at room temperature does not further limit the structure of the final connection system. Even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. See *In re Thorpe*, 777 F.2d 695, 698, 227USPQ 964, 966 (Fed. Cir. 1985).

For claims 4-7, 11-15, 18, 21 and 24, Applicant should note that it is within the general knowledge of one of ordinary skill in the art to select the appropriate adhesive

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for the connection and that fast setting adhesives are old and well known to those of ordinary skill in the art.

3. Claims 1-3, 16, 17, 19, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Orowan.

Applicant, at pages 1 and 3 of the specification to be known as AAPA, discloses a connection system for light gauge steel construction and an assembly wherein numerous self-drilling screws or other fasteners are used to provide the connection between a panel and a support structure. AAPA does not disclose applying an adhesive curable at room temperature to at least the panel or the support structure and placing them against each other. However it is known to use an adhesive material between plates of a lap joint used in a connection with rivets or other fasteners as attested by Orowan, see column 1, lines 8-30 and figure 1. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used an adhesive material in the connection of AAPA, in light of the teachings of Orowan, in order to relieve the load on fasteners to a relatively small extent and give protection against fretting between the parts joined. Applicant should note that the connection of Orowan is significantly enhanced in load bearing capacity, see column 1, lines 24-29 in particular. Regarding the recitation of the adhesive being curable at room temperature, Applicant should note that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used an adhesive curable at room temperature to supplement the fasteners in the connection taught by AAPA/Orowan as evidenced by Applicant's admission that such adhesives are known, see page 3, lines

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8-13 of the specification, in order to realize the benefits of using such known and available adhesives. Furthermore the product-by-process limitation that the adhesive is curable at room temperature does not affect the claimed connection system and therefore does not impart patentability to the product. As outlined above the connection system in the product-by-process claim is obvious from the connection of AAPA/Orowan. Furthermore the connection system itself comprises epoxy adhesive and at least one fastener in the joint. The fact that the adhesive was cured at room temperature does not further limit the structure of the final connection system. Even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. See *In re Thorpe*, 777 F.2d 695, 698, 227USPQ 964, 966 (Fed. Cir. 1985). For the recitation of "applying a bead of adhesive", owing to the commonly accepted meaning of the word "bead" to mean "a projecting band", the examiner contends that any coating of adhesive could be considered a "bead" and particularly the coating of adhesive as illustrated in figure 1 of Orowan is definitely a "bead".

4. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA/Orowan as applied to claim 1 above, and further in view of Good et al. (US Patent 4,426,425).

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AAPA/Orowan discloses a connection system as shown above except for the adhesive being a two-part epoxy system comprising a resin and a hardener mixed in equal portions by weight or volume wherein the adhesive fully cures within 72 hours. However Good et al. teaches such adhesive, see column 2, lines 26-34 and 49-53 and column 3, lines 8-20. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used a two-part epoxy adhesive system in the connection of AAPA/Orowan, in light of the teachings of Good et al., in order to achieve a superior shear and bond strength. Applicant should note that curable adhesives usually cure within 72 hours. Regarding the recitation of "a two-part epoxy system comprising a resin and hardener mixed in equal portions by weight or volume", as showed above Good et al. teaches a two-part epoxy system, see column 2, lines 49-53 and column 3, lines 8-25 where it is stated that "a useful range of hardener for the particular resin employed therein in parts by weight based on total parts by weight of resin plus hardener of 100, is indicated to be 16 to 30, or more. The most effective amount of hardener for any particular resin system, and its application, including curing considerations, are readily ascertainable by those of ordinary skill in the art." It is the examiner's position that the "16 to 30 or more" statement in Good et al. includes 50% by weight of hardener. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a two-part epoxy with an equal amount by weight of resin and hardener in the connection system of AAPA/Orowan/Good et al. since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the

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art. *In re Aller*, 105 USPQ 233. Furthermore Applicant admits at page 3 of the specification that two-part epoxy adhesives mixed in equal portions by weight or volume and curable at room temperature are known.

5. Claims 8-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Orowan and Good et al.

With regards to claims 8-10, Applicant, at pages 1 and 3 of the specification to be known as AAPA, discloses a connection system for light gauge steel construction wherein numerous self-drilling screws or other fasteners are used to provide the connection between a panel and a support structure. AAPA does not disclose applying a bead of epoxy curable at room temperature to at least the panel or the support structure and placing them against each other. However it is known to use an adhesive material between plates of a lap joint used in connection with rivets or other fasteners as attested by Orowan, column 1, lines 8-30 and figure 1. Furthermore, Good et al. teaches using an epoxy as adhesive to adhere metal members, see column 2, lines 26-34. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have an epoxy adhesive in the connection of AAPA, in light of the teachings of Orowan and Good et al., in order to relieve the load on the fasteners to a relatively small extent and achieve a superior shear and bond strength. Appellant should note that the connection of Orowan is significantly enhanced in load bearing capacity, see column 1, lines 24-29 of Orowan. Regarding the recitation of the adhesive being curable at room temperature, Applicant should note that it would have been obvious to one of ordinary skill in the art at the time the invention was made to

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have used an adhesive curable at room temperature to supplement the fasteners in the connection taught by AAPA/Orowan as evidenced by Applicant's admission that such adhesives are known, see page 3, lines 8-13 of the specification, in order to realize the benefits of using such known and available adhesives. Furthermore the product-by-process limitation that the adhesive is curable at room temperature does not affect the claimed connection system and therefore does not impart patentability to the product. As outlined above the connection system in the product-by-process claim is obvious from the connection of AAPA/Orowan. Furthermore the connection system itself comprises epoxy adhesive and at least one fastener in the joint. The fact that the adhesive was cured at room temperature does not further limit the structure of the final connection system. Even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. See *In re Thorpe*, 777 F.2d 695, 698, 227USPQ 964, 966 (Fed. Cir. 1985). For the recitation of "applying a bead of adhesive", owing to the commonly accepted meaning of the word "bead" to mean "a projecting band", the examiner contends that any coating of adhesive could be considered a "bead" and particularly the coating of adhesive as illustrated in figure 1 of Orowan is definitely a "bead".

For claims 12-15, see column 2, lines 25-34 and column 3, lines 8-20 of Good et al.

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6. Claims 18, 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA/Orowan as applied to claims 16, 19 and 22 above, and further in view of Good et al.

AAPA/Orowan discloses a connection system and an assembly as shown above except for the adhesive being selected from the group consisting of epoxy, methacrylate and urethane or the adhesive being a two-part epoxy system. However Good et al, teaches such adhesive, see column 2, lines 25-29. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used a two-part epoxy system as the adhesive of AAPA/Orowan, in light of the teachings of Good et al., in order to achieve superior shear and bond strength.

Response to Arguments

7. Applicant's arguments filed May 11, 2005 have been fully considered but they are not persuasive.

In response to Applicant's argument that there is no basis or suggestion that a person of ordinary skill in the gauge steel construction industry at the time of the invention would consider adhesives or turn to the Orowan reference in connection with fastening light gauge steel panels to a support structure, the examiner respectfully disagrees. As outlined in the above rejections Orowan clearly discloses using mechanical fasteners in combination with adhesives to joint metallic parts, see figure 1.

In response to Applicant's argument that the problem posed to the inventor was not the relief of load on the fasteners or fretting of the fasteners as disclosed in the

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- Orowan reference but was in fact a desire to reduce the labor-intensive nature of light gauge steel construction, the fact that Applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

In response to Applicant's argument that the examiner has failed to address why presented with the Orowan reference one would turn yet to another reference for a specific adhesive since Orowan has presumably solved the alleged problem, the examiner submits that in light of evolving technologies, one would use the best available product on the market for best results. Like any other technology the adhesives technology is a constantly evolving one and new and improved adhesives are being regularly introduced in the market. Therefore it is the examiner's position one of ordinary skill in the art would seek the best available adhesive that is suitable for the particular application being dealt with.

In response to Applicant's disagreement that the "16-30 or more" statement in Good et al. includes 50% by weight of hardener, and the following linking conclusion, the examiner would like to bring Applicant's attention to column 3, lines 9-21 which concludes with the following quote: "the most effective amount of hardener for any particular resin system, and its application, including curing temperatures considerations, are readily ascertainable by those skilled in the art". Furthermore the examiner maintains that "16-30 or more" is an open range that includes 50.

In response to Applicant's disagreement regarding the examiner position that "any coating of adhesive could be considered a bead", the examiner submits that such conclusion is derived from the generally accepted meaning of the word "bead".

8. The affidavit under 37 CFR 1.132 filed May 11, 2005 is insufficient to overcome the rejection of claims 1-24 based upon AAPA/Orowan/Good et al. applied under 35 U.S.C 103 as set forth in the present Office action because the affidavit merely repeats the arguments presented by Applicant in response to the different Office actions present in the instant application. The examiner has clearly responded to each argument presented by Applicant; see Office action mailed December 12, 2002 and the above response.

Furthermore it states that the claimed subject matter solved a problem that was long standing in the art. However, there is no showing that others of ordinary skill in the art were working on the problem and if so, for how long. In addition, there is no evidence that if persons skilled in the art who were presumably working on the problem knew of the teachings of the above cited references, they would still be unable to solve the problem. See MPEP § 716.04.

In view of the foregoing, when all of the evidence is considered, the totality of the rebuttal evidence of nonobviousness fails to outweigh the evidence of obviousness.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

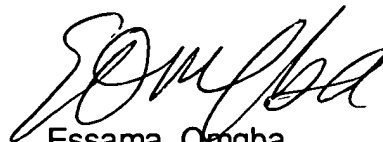
10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Essama Omgba whose telephone number is (571) 272-4532. The examiner can normally be reached on M-F 9-6:30, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Essama Omgba
Primary Examiner
Art Unit 3726

eo
July 15, 2005